

Abstract

2 Stented tubular grafts of expanded, sintered polytetrafluoroethylene (PTFE). The
3 stented PTFE grafts of the present invention include an integrally stented
4 embodiment, an externally stented embodiment, and an internally stented
5 embodiment. In each embodiment, the stent may be either self-expanding or
6 pressure-expandable. Further, the stent may comprise a plurality of elements,
7 wherein each said element comprises an undulating linear shape formed into a
8 generally cylindrical configuration, and wherein each said element is connected
9 to an adjacent neighbor element by at least one linear connector. Also, in each
10 embodiment, the stent may be coated or covered with a plastic material capable
11 of being affixed (e.g., heat fused) to PTFE. Manufacturing methods are also
12 disclosed by the individual components of the stented grafts are preassembled
13 on a mandrel and are subsequently heated to facilitate attachment of the PTFE
14 layer(s) to one another and/or to the stent. A method for the treatment of
15 cardiovascular disease by implantation of the stented graft, and an article of
16 manufacture, comprising packaging material and the stented graft are also
17 taught.